

The Office Action rejects claims 1-12 under 35 U.S.C. §103(a) over U.S. Patent 6,222,624 to Yonezawa in view of U.S. Patent 6,166,393 to Paul et al. This rejection is respectfully traversed.

Neither Yonezawa nor Paul et al. discloses or suggests obtaining "a logical OR of said plurality of sets of detection information" as recited in independent claims 1 and 8-12.

The Office Action acknowledges that neither reference explicitly discloses obtaining a logical OR. However, the Office Action asserts that "since each test under different conditions will be detecting a different set of errors, it would have been obvious to decide that a defect exists if any one of the different tests shows a detectable error; this obvious 'any one' test is the logical equivalent of the claimed 'logical OR'." See the Office Action at, for example, page 2, item 2, second paragraph. Applicants respectfully disagree.

Yonezawa does not even compare different sets of detection information obtained under different inspection conditions. Rather, Yonezawa compares sets of detection information from different parts of the pattern (a pattern at a first position and a pattern at a second position) under similar inspection conditions (each position is illuminated with dark-field illumination and bright-field illumination). See Yonezawa at, for example, col. 7, line 48 to col. 8, line 10 and claim 1.

Paul et al. illuminates a test piece with three different wavelengths of light, and optionally under different illumination angles. However, as described, for example, at col. 13, line 1-45, Paul et al. combines the various signals in different ways in order to determine whether there are any defects. Taking the logical OR of the different color signals of Paul et al. is inconsistent with, and would destroy, the inspection process performed by Paul et al. Accordingly, Paul et al. also does not disclose or suggest taking the logical OR of a plurality of sets of detection information as recited in the independent claims of this application.

In addition, neither reference teaches or suggests a first illumination device that irradiates illumination light on the surface of a test piece at a variable first angle of incidence,

and a second illumination device that irradiates illumination light from a light source formed in a slit onto the surface of the test piece at a second angle of incidence larger than the first angle of incidence, as recited in claim 10.

Accordingly, the Office Action has failed to establish a prima facie case of obviousness, as the applied references fail to teach or suggest all of the subject matter of independent claims 1 and 8-12. Accordingly, the applied references fail to render obvious the subject matter of claims 3-7, which depend from independent claim 1. Withdrawal of the rejection under 35 U.S.C. §103(a) is therefore respectfully solicited.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



Mario A. Costantino
Registration No. 33,565

Robert A. Evora
Registration No. 47,356

MAC:RZE/dmw

Attachments:

Appendix
Petition for Extension of Time

Date: July 29, 2002
OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
--



APPENDIX

Changes to Claims:

The following is a marked-up version of the amended claim:

6. (Amended) A surface inspection method according to claim 1, wherein:
- said plurality of inspection conditions are each set in conformance to an order of diffracted light corresponding to a specific pitch of the pattern on the test piece.

RECEIVED
AUG - 1 2002
TECHNOLOGY CENTER 2800